Curriculum Vitae

(July 17, 2013)

André Luiz Carvalho de Gouvêa

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Major Professional Interests

Theoretical Physics, Elementary Particle Physics, Early Universe Cosmology, Neutrino Physics, Phenomenology.

Education

Ph.D.	University of California, Berkeley, May 1999 Advisor: Hitoshi Murayama Thesis Title: "Supersymmetric Versions of the Standard Model"
M.A.	Pontificia Universidade Catolica do Rio de Janeiro (PUC-Rio), Brazil, August 1995 Advisor: João Carlos dos Anjos (CBPF, Brazil) Thesis Title: "Measurement of the Polarization of the Hyperons $\Xi^{\pm}$ and $\Omega^{\pm}$ in the Fermilab Experiment E791" [in portuguese]
B.Sc.	PUC-Rio, Brazil, January 1994 Major: Physics

Professional Experience

	Associate Professor
Current	Northwestern University
	Assistant Professor
2003-2009	Northwestern University
	Post Doctoral Fellow
2001-2003	Fermilab - Theoretical Physics Division
1999-2001	CERN - Theory Division
	Graduate Student Researcher
1997-99	Lawrence Berkeley National Laboratory and University of California, Berkeley, with H. Murayama
	Graduate CNPq (Brazil) Research Fellow
1994-1995	Physics Department, PUC-Rio, Brazil and CBPF, Brazil, with J.C. dos Anjos
	Undergraduate CNPq (Brazil) Research Fellow
1993	CBPF, Brazil, with J.C. dos Anjos
1992	Physics Department, PUC-Rio, Brazil, with C.A.A. de Carvalho
1991	Physics Department, PUC-Rio, Brazil, with R.C. Shellard

Teaching

Courses Taught

	at Northwestern University
S2013	PHYS 428-3 – Quantum Field Theory (Graduate)
W2013	PHYS 125-2 – Freshman Physics for Integrated Science Program, Electromagnetism (Undergraduate)
F2012	PHYS 411-1 – Mathematical Methods of Theoretical Physics
W2012	PHYS 428-2 – Quantum Field Theory (Graduate)
F2011	PHYS 428-1 – Quantum Field Theory (Graduate)
S2011	PHYS 428-3 – Quantum Field Theory (Graduate)
W2011	PHYS 428-2 – Quantum Field Theory (Graduate)
F2010	PHYS 428-1 – Quantum Field Theory (Graduate)
S2010	PHYS 339-2 – Quantum Mechanics (Undergraduate)
W2010	PHYS 330-2 – Advanced Classical Mechanics (Undergraduate)
F2009	PHYS 330-1 – Advanced Classical Mechanics (Undergraduate)
W2008	PHYS 330-2 – Advanced Classical Mechanics (Undergraduate)
F2007	PHYS 330-1 – Advanced Classical Mechanics (Undergraduate)
W2007	PHYS 125-2 – Freshman Physics for Integrated Science Program, Electromagnetism (Undergraduate)
F2006	PHYS 125-1 – Freshman Physics for Integrated Science Program, Mechanics (Undergraduate)
W2006	PHYS 125-2 – Freshman Physics for Integrated Science Program, Electromagnetism (Undergraduate)
F2005	PHYS 125-1 – Freshman Physics for Integrated Science Program, Mechanics (Undergraduate)
S2005	PHYS 428-3 – Quantum Field Theory (Graduate)
W2005	PHYS 428-2 – Quantum Field Theory (Graduate)
S2004	PHYS 442 – Advanced Topics in High Energy Physics (Graduate)
W2004	PHYS 428-2 – Quantum Field Theory (Graduate)
	at Columbia University
S2008	Advanced Topics in High Energy Physics – Neutrino Physics
	Summer Schools
2013	"Neutrino Physics"
	Escola de Inverno Gleb Wataghin, Campinas University, Brazil
2013	"Neutrino Physics"
	TRISEP, TRIUMF, Vancouver, Canada
2013	"Neutrino Physics"
	Sangam at HRI, Allahabad, India
2013	"Neutrino Physics"
	DCPIHEP, Colima, Mexico
2012	"Fundamental Physics with Muons (and Related Topics)"
	PASI 2012, Buenos Aires, Argentina
2009	"Two Lectures on Neutrino Theory/Phenomenology"
	37th Annual SLAC Summer Institute, SLAC
2009	"Possible Surprises in Future Neutrino Experiments"
	International Neutrino Summer School, Fermilab
2009	"Two Lectures on Neutrino Physics"
	VII Latin American Symposium on High Energy Physics, Bariloche, Argentina
2007	"Open Questions – The Big Picture"
	Neutrino Physics Summer School, Fermilab, IL
2007	"Neutrino Physics"
	Summer School on Particle Physics, ICTP, Trieste, Italy
2007	"Neutrino Physics"
	Spring School on Particles Physics , Taipei, Taiwan
2006	"Neutrino Theory and Phenomenology"
	PASI 2006, Puerto Vallarta, Mexico
2004	"Neutrino Physics"
	TASI 2004, Boulder, CO

Academic Lectures

2013 "The Intensity Frontier"
Fermilab Undergraduate Summer Lecture Series

2012 "Neutrino Physics and Phenomenology"
DZero University

2012 "The Intensity Frontier"
Fermilab Undergraduate Summer Lecture Series

2003 "Introduction to Neutrino Oscillations"
Fermilab

Graduate Student Instructor

1995-97 Department of Physics
University of California, Berkeley

1994-95 Department of Physics
PUC-Rio, Brazil

Courses taught at PUC-Rio: Basic Physics Lab (1 semester) and
Physics for Art Majors (2 semesters)
at UC Berkeley: Lower Division Physics (2 semesters)
Upper Division Classical Mechanics (1 semester) and
Upper Division Statistical Mechanics (1 semester)

Grants

2004-2005 Research In Theoretical Particle Physics
Principal Investigator (together with Prof. R.N. Oakes)
Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK F
Amount: US$ 66,000

2005-2006 Research In Theoretical Particle Physics
Principal Investigator (together with Prof. R.N. Oakes)
Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK F
Amount: US$ 87,000

2006-2007 Phenomenology of Neutrino Physics and Physics Beyond the Standard Model
Principal Investigator, (together with Prof. R.N. Oakes)
Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK F
Amount: US$ 87,000

2007-2008 Phenomenology of Neutrino Physics and Physics Beyond the Standard Model
Principal Investigator, Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK B
Amount: US$ 85,000

2008-2009 Phenomenology of Neutrino Physics and Physics Beyond the Standard Model
Principal Investigator, Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK B
Amount: US$ 83,000

2008-2009 Principal Investigator, Grant awarded by the Universities Research Alliance
URA Visiting Scholar Program
Amount: US$29,975

2009-2010 Phenomenology of Neutrino Physics and Physics Beyond the Standard Model
Principal Investigator (together with Ian Low), Grant awarded by US Department of Energy
Contract DE-FG02-91ER40684, TASK B

	Amount: US$ 150,000
2010	Supplement for Supporting Graduate Students During the Summer Principal Investigator (together with Ian Low), Grant awarded by US Department of Energy Contract DE-FG02-91ER40684, TASK B Amount: US$ 20,000
2010-2011	Phenomenology of Neutrino Physics and Physics Beyond the Standard Model Principal Investigator (together with Ian Low), Grant awarded by US Department of Energy Contract DE-FG02-91ER40684, TASK B Amount: US$ 150,000
2011-2012	Phenomenology of Neutrino Physics and Physics Beyond the Standard Model Principal Investigator (together with I. Low and F. Petriello), Grant awarded by US Department of Energy Contract DE-FG02-91ER40684, TASK B Amount: US$ 230,000
2012-2013	Phenomenology of Neutrino Physics and Physics Beyond the Standard Model Principal Investigator (together with I. Low and F. Petriello), Grant awarded by US Department of Energy Contract DE-FG02-91ER40684, TASK B Amount: US$ 40,878 (until May 2013)
2013-2014	Phenomenology of Neutrino Physics and Physics Beyond the Standard Model Principal Investigator (together with I. Low and F. Petriello), Grant awarded by US Department of Energy Contract DE-FG02-13ER41920, TASK F Amount: US$ 239,000 (after May 2013)

Honors and Awards

2012	Elected Fellow of American Physical Society
1999-2001	Non Member State Fellowship, awarded by CERN, Switzerland
1995-99	Ph.D. Fellowship Abroad, awarded by CNPq, Brazil
1994-95	Master's Degree Fellowship, awarded by CNPq, Brazil
1990-93	Fellowship for Academic Performance, awarded by PUC-Rio, Brazil

Leaves of Absence

2008-2009	September 2008 to June 2009 Visiting Scholar at Fermi National Laboratory
Project	Neutrino Masses as Windows to Physics Beyond the Standard Model Funded by Universities Research Association via the URA Visiting Scholar Program Amount: US$29,975
2008	March 15 to May 8 Visiting Scholar at Columbia University
Project	Neutrino Physics Funded by the Columbia University Physics Department Amount: US$12,383 (salary) + US$2,000 (travel) + local expenses

Conferences, Meetings, and Schools, Including Invited and Contributed Talks and Lectures

2013	DPF Community Summer Study – Minneapolis, Minnesota Invited ParalellTalk (Project X): Project X and the "Big Questions" Invited Plenary Talk (Future of Theoretical Physics): Neutrinos Invited Panel: Must there be new physics? Where will we find it?
2013	Snowmass on the Pacific – KITP – Santa Barbara, California Invited Talk: Models leading to tree-level lepton number violation Invited Panel: Townhall Meeting

2013 International Symposium: Opportunities in Underground Physics (ISOUPS) – Asilomar, California
Invited Talk: Synergy – Lepton Flavor Physics and Underground Physics

2013 Intensity Frontier Workshop – Argonne National Lab

2013 Intensity Frontier Neutrino Subgroup Workshop – SLAC, California
Talk: Neutrinos – Overview and Snowmass Process

2013 AAAS Annual Meeting – Boston, Massachusetts
Invited Talk: Neutrinos: What and Why?

2013 New Directions in Neutrino Physics – Aspen, Colorado

2013 DCPIHEP Workshop – Colima, Mexico
Invited Lectures: Neutrino Physics

2012 Frontiers of High Energy Physic Workshop – IMSc, Chennai, India
Invited Lecture: Neutrinos Have Mass – So What?

2012 Neutrino Flux Workshop – Pittsburgh
Invited Talk: Neutrino Physics: Motivation and Update

2012 Community Planning Meeting – Fermilab

2012 Next Generation Nucleon Decay and Neutrino Detector Workshop (NNN) – Fermilab
Invited Talk: On Neutrino and Nucleon Decay Physics

2012 Behind the Neutrino Mass (BENE 2012) – ICTP, Trieste, Italy
Invited Talk: Lepton Mixing Anarchy

2012 WHAT IS ν? – Galileo Galilei Institute, Florence, Italy
Invited Talk: The Very Low-Energy Seesaw, one Perspective on Sterile Neutrinos

2012 45th Annual Users' Meeting – Fermilab
Invited Talk: The Current State of Neutrino Theory

2012 The Hunt for New Particles, from the Alps to the Plains to the Rockies – Aspen, Colorado
Invited Talk: Neutrino Theory

2011 Intensity Frontier Workshop – Rockville, Maryland
Plenary Talk: Neutrino Working Group Summary

2011 Neutrino Working Group Meeting – Fermilab
Talk: Introduction

2011 Brookhaven Forum – Brookhaven
Invited Plenary Talk: Recent Neutrino Results

2011 International Workshop on Baryon and Lepton Number Violation (BLV2011) – Gatlinburg, Tennessee
Invited Talk: Charged-Lepton Flavor-Violation – Some Phenomenology

2011 13th International Workshop on Neutrino Factories, SuperBeams and Beta Beams (NuFact 11) – CERN and University of Geneva
Discussion Leader. Topic: Physics Motivation for Long-baseline experiments
Invited Workshop Summary Talk: Workshop Summary

2011 Implications of Neutrino Flavor Oscillations (INFO2011) – Santa Fe, New Mexico
Invited Talk: Exploring the Origin of Neutrino Masses: from neV to YeV

2011 Muon Collider Workshop – Telluride, Colorado
Invited Talk: (Some of the) Particle Physics on the Way to the Muon Collider

2011 Short Baseline Neutrino Workshop – Fermilab
Discussion Leader. Topic: Interpretations of Short Baseline Data.

2011 Heilborn Symposium – Northwestern
Invited Talk: Muons and Fundamental Physics

2011 New Data from the Energy Frontier Workshop – Aspen, Colorado
Invited Talk: Neutrino Physics and Other Intense Matters

2010 Project X Muon Workshop – Fermilab
Invited Talk: Overview of Muon Fundamental Physics

2010 Pre-DNP 2010 Workshop: Neutrinos and Fundamental Symmetries – Santa Fe.
Invited Talk: Muons and Fundamental Physics: Theoretical Perspectives

2010 NuTheme: Workshop on Neutrino Theory, Models, and Experimental Perspectives – CERN, Switzerland

2010 XXXVIII SLAC Summer Institute: Neutrinos: Nature's Mysterious Messengers – SLAC California
Invited Talk: Putting it All Together: What Do These Results Mean?

2010 XXXV International Conference on High Energy Physics – Paris, France

2010 UK Neutrino Factory Oversight Committee Meeting – Rutherford Appleton Lab, England
Invited Talk: The Neutrino Factory As Part of the Muon Physics Program

2010 XXIV International Conference on Neutrino Physics and Astrophysics – Athens, Greece

2010 43rd Annual Users' Meeting – Fermilab
Invited Talk: (Particle) Physics with Extreme Beams

2010 AAAS Annual Meeting – San Diego, California
Invited Talk: What Are Neutrinos, and Why Do We Care?

2009 Workshop on Main Injector Non-Standard Interaction Searches – Madrid, Spain
Invited Talk: Probing the Seesaw Energy Scale: from neV to MeV

2009 Meeting of the International Design Study for a Neutrino Factory Complex – Mumbai, India
Invited Talk: Charged-Lepton Flavor Violation – Theory and Phenomenology (presented remotely)

2009 Workshop on an European Strategy for Future Neutrino Physics – CERN, Switzerland
Invited Talk: Current Situation in the Neutrino and Charged-Lepton Sectors

2009 Neutrinos and Dark Matter Conference – Madison, Wisconsin
Invited Talk: New Physics in Future Neutrino Experiments(?)

2009 NuFlavor Workshop – Cosener's House, England
Invited Talk: Phenomenological Perspective on Lepton Flavor Violation

2009 Flavor Physics and CP-Violation Workshop – Lake Placid, New York

Invited Talk: Neutrino Physics

2009 Third Indo-US Frontiers of Science Symposium – Agra, India
Invited Talk: Particle Physics: Exploring the Energy and Intensity Frontiers

2009 The Year of the Ox (Physics at the LHC Era) – Aspen, Colorado
Invited Talk: Neutrino Physics Theory

2009 New $g-2$ Collaboration Meeting – Fermilab
Invited Talk: Muon $g-2$, New TeV-Scale Physics, and Charged-Lepton Flavor Violation

2008 9th Seminar of the International Committee for Future Accelerators – SLAC, California
Invited Talk: Overview of Neutrino Physics Issues and Opportunities

2008 Neutrino Frontiers – University of Minnesota
Invited Talk: What is the Energy Scale of the Physics Responsible for Neutrino Masses?

2008 Workshop on Underground Detectors Investigating Grand Unification – Brookhaven National Laboratory
Invited Parallel Talk: Review of Neutrino Theory

2008 Neutrino Oscillation Workshop(NOW 2008) – Conca Specchiulla, Otranto, Italy
Invited Plenary Talk: Lepton Flavor Violation

2008 10th International Workshop on Neutrino Factories, SuperBeams and Beta Beams (NuFact 08) – Valencia, Spain
Invited Plenary Talk: Beyond Three Neutrino Oscillations
Invited Parallel Talk: Theoretical Motivation for Electroweak Physics with Neutrinos

2008 Second Plenary Meeting of the International Design Study for a Neutrino Factory – Fermilab
Invited Parallel Talk: What is the Energy Scale of the Physics Responsible for Neutrino Masses?

2008 Heavy Quarks and Leptons (HQ&L08) – Melbourne, Australia
Invited Talk: Neutrino Mass, Mixing and Oscillations (Theory)

2008 Melbourne Neutrino Theory Workshop – Melbourne, Australia
Invited Talk: What is the Energy Scale of the Physics Responsible for Neutrino Masses?

2008 XXIII International Conference on Neutrino Physics and Astrophysics (Neutrino 2008) – Christchurch, New Zealand
Poster: What is the Energy Scale of the Physics Responsible for Neutrino Masses?

2008 April 2008 Meeting of the American Physical Society – Saint Louis, Missouri
Talk at Invited Session "American Particle Physics in the Coming Era"
Title: Exploring the Open Neutrino Questions

2008 DUSEL Theory Workshop – Ohio State University, Columbus, Ohio
Invited Talk: What if $|U_{e3}|^2 < 10^{-4}$? Neutrino Factories and Other Matters

2008 DOE/NSF HEPAP Subpanel: Particle Physics Project Prioritization Panel (P5) Meeting – Fermilab
Invited Talk: Physics with Project X

2008 Second Workshop on Physics with a High Intensity Proton Source – Fermilab
Summary Talk: Muon Physics

2007 First Workshop on Physics with a High Intensity Proton Source – Fermilab

2007 Workshop on TeV-scale Physics and Neutrino Masses – TRIUMF, Vancouver, Canada
Invited Talk: Neutrino Masses and New Physics At/Below The Weak Scale

2007 XXIII International Symposium on Leptons and Photon Interactions at High Energies
(Lepton-Photon 2007) – Daegu, South Korea
Invited Plenary Talk: Neutrino Physics – Current Understanding and Open Theoretical Questions

2007 Flavor Physics and CP-Violation Conference (CIPANP 2007) – Bled, Slovenia
Invited Plenary Talk: Theory of Charged-Lepton Flavor Violation

2007 Phenomenology Symposium: Prelude to the LHC (Pheno 2007) – University of Wisconsin at Madison
Invited Plenary Talk: Neutrino Masses and Oscillations

2007 Mini-Workshop on the Frontiers of Particle Phenomenology –
Center for Theoretical and Computational Physics, NCU, Taiwan
Invited Talk: Neutrino Masses and New Physics at or Below the Weak Scale

2007 New Physics at the Electroweak Scale and New Signatures at Hadron Colliders – Aspen, Colorado
Invited Talk: Advances in "Neutrino Theory"

2006 Latin American Symposium on High Energy Physics (SILAFAE 2006) - Puerto Vallarta, Mexico
Invited Plenary Talk: Neutrino Mass Theory

2006 MU2E Meeting - Fermilab
Invited Talk: Charged-Lepton Flavor Violation - Theory

2006 Eigth International Workshop on Neutrino Factories and Superbeams (NuFact'06) – Irvine, California
Invited Plenary Talk: Low-Energy Muon Physics and Phenomenology

2006 XXII International Conference on Neutrino Physics and Astrophysics (Neutrino 2006) –
Santa Fe, New Mexico
Poster: eV SeeSaw Sterile Neutrinos and the LSND Anomaly

2006 Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2006) – San Juan, Puerto Rico
Summary Talk: Neutrino Masses and Mixing

2006 NuSAG Meeting – Chicago, IL
Invited Informational Talk: The Physics of Long-Baseline Neutrino Detectors

2006 Workshop on Collider Physics – Argonne National Lab, IL

2006 Cryogenic Liquid Detectors for Future Particle Physics – Gran Sasso Laboratory, Italy
Invited Talk: What We Know We Don't Know – Hints for New Physics

2005 International Scoping Study of A Future Neutrino Factory and Super-beam Facility:
Physics Working Group Meeting – Imperial College, London, England
Talk: Neutrino Oscillations and the Particle Physics Roadmap
Talk: Muon Theory

2005 Mexican Workshop on Particles and Fields - Morelia, Mexico
Invited Plenary Talk: Theoretical Status of Neutrino Physics

2005 International Scoping Study of A Future Neutrino Factory and Super-beam Facility –
CERN, Geneva, Switzerland
Invited Talk: (Oscillation) Physics with a Neutrino Factory

2005 Workshop on Implications of Neutrino Flavor Oscillations (INFO 2005) – Santa Fe, New Mexico
Invited Talk: The Seesaw Energy Scale and the LSND Anomaly

2005 Kaon 2005 - Evanston, IL
Invited Plenary Talk: Leptonic CP-Invariance Violation

2005 International Workshop on Weak Interactions and Neutrinos (WIN'05) – Delphi, Greece
Summary Talk: Neutrino Physics - Theory

2005 High Intensity Frontier Workshop (HIF 2005) – Isola d'Elba, Italy
Invited Plenary Talk: The Brave ν World

2005 Theory Institute – Argonne National Laboratory
Invited Talk: The Brave ν World

2004 Astrophysics Workshop on Fundamental Physics from Clusters of Galaxies – Fermilab

2004 Workshop on Physics at an Upgraded Proton Driver– Fermilab
Invited Talk: Neutrino Oscillations as Probes of GUTs (and Fundamental Physics in General)

2004 TeV4LHC Workshop - Fermilab, Batavia, IL

2004 Annual Meeting of the Division of Particles and Fields (DPF2004)– UC Riverside, California
Invited Plenary Talk: Neutrino Physics Theory

2004 Summer workshop on "Lepton Number Violation: Neutrinos, Leptogenesis, Grand Unified Theories and Beyond," – Aspen Center for Physics, Aspen, Colorado
Invited Talk: Status of the APS Neutrino Report

2004 American Physical Society Neutrino Meeting – Snowmass, CO

2004 XXI International Conference on Neutrino Physics and Astrophysics (Neutrino 2004) – Paris, France
Invited Plenary Talk: Neutrino Properties and Tests of Symmetries
Poster: The Deviation of Atmospheric Mixing from Maximal and Structure in the Leptonic Sector

2004 Theory Institute – Argonne National Lab
Invited Talk: Searching for New New Physics with Neutrino Oscillations

2004 From Zero to Z-zero Workshop – Fermilab, Batavia, IL

2004 Aspen Winter Conference in Particle Physics: Where We Are and Where We Are Going – Aspen, Colorado
Invited Talk: Neutrinos: What Have We Learned and Open Questions

2004 American Linear Collider Physics Group Winter Workshop – SLAC, Palo Alto, California
Parallel Talk: Lepton Number Violation in $\gamma\gamma$-Colliders

2003 American Physical Society Neutrino Meeting – Argonne National Lab,

2003 Weak Interactions and Neutrinos Workshop (WIN'03), Lake Geneva, Wisconsin

2003 XXI International Symposium on Leptons and Photon Interactions at High Energies (Lepton-Photon 2003) – Fermilab, Batavia, IL

2003 Fifth International Workshop on Neutrino Factories and Superbeams (NuFact'03) - New York, New York
Invited Talk: Theoretical Aspects of Lepton Flavor Violation
Invited Talk: Natural Expectations for U_{e3}?

2003 The Tenth Marcel Grossman Meeting on General Relativity – Rio de Janeiro, Brazil
Invited Talk: CP-Violation from Majorana Phases
Invited Talk: Statistical Test of Neutrino Mass Anarchy

2003 Workshop on Trends in Neutrino Physics – Argonne National Lab
Invited Talk: $|U_{e3}|$: Experimental and Theoretical Challenges

2003 Second NuMI Off-Axis Experiment Detector Workshop – Argonne National Laboratory
Invited Talk: Next-Generation Neutrino Experiments: What to Aim at, and Why

2003 Neutrinos: Data, Cosmos, and the Planck Scale – Santa Barbara, California

2003 At the Frontiers of Particle Physics – Aspen, Colorado
Invited Talk: A Theoretical Overview of Neutrino Physics

2002 International Workshop on Particle Physics and the Early Universe (COSMO 02) – Chicago

2002 Argonne National Lab Theory Institute: Supersymmetry, Higgs and Extra Dimensions –
Argonne National Lab
Invited Talk: Neutrino Oscillations – Current Status, Near Future Expectations and
Challenges for Next-Generation Experiments

2002 XX International Conference on Neutrino Physics and Astrophysics (Neutrino 2002) – Munich, Germany
Poster: Solving the Solar Neutrino Puzzle with KamLAND and Solar Data

2002 Workshop on New Initiatives for the NuMI Neutrino Beam – Fermilab
Plenary Talk: Measuring Oscillation Parameters with Off-Axis Beams

2002 Current and Upcoming Discoveries in Particle Physics – Aspen, Colorado

2001 Third International Workshop on Neutrino Factories Based on Muon Storage Rings (NuFact'01) –
Tsukuba, Japan
Plenary Talk: Neutrino Oscillations - Theory
Parallel Talk: Lepton Flavor Violation in Supersymmetric Models with Trilinear R-parity Violation

2000 European Research Conference on Frontiers in Particle Astrophysics and Cosmology –
San Feliu de Guixols, Spain
Parallel Talk: The Survival Probability of GeV Solar Neutrinos of All Active Species

2000 Summer workshop on "New Physics at the Electroweak Scale" at the Aspen Center for Physics –
Aspen, Colorado
Talk: The Status of Solar Neutrino Oscillations

2000 International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 2K) –
CERN, Geneva, Switzerland
Parallel Talk: The Dark Side of the Solar Neutrino Parameter Space

2000 XIX International Conference on Neutrino Physics and Astrophysics (Neutrino 2000) – Sudbury, Canada
Poster: The Dark Side of the Solar Neutrino Parameter Space
Poster: Determining the Flavor Content of the Low Energy Solar Neutrino Flux

1999 International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 99) –
Fermilab
Parallel Talk: Seasonal Variation of the ^{7}Be Solar Neutrino Flux

1997	Theoretical Advancement Institute in Elementary Particle Physics (TASI 97) – University of Colorado, Boulder, Colorado
1995	Lafex International School on High Energy Physics (LISHEP 95) – CBPF, Rio de Janeiro, Brazil
1994	Brazilian Congress of Particle Physics, Quantum Field Theory, and Cosmology – Angra dos Reis, Brazil Parallel Talk: Hyperon Polarization in Fixed Target Experiments
1993	Lafex International School on High Energy Physics (LISHEP 93) – CBPF, Rio de Janeiro, Brazil

Invited Seminars† and Colloquia* at

Argonne National Laboratory† - IL, USA
Aspen Center for Physics† - CO, USA
Brookhaven National Laboratory† - NY, USA
California Institute of Technology† - CA, USA
Carnegie Mellon University* - Pittsburgh, PA, USA
CERN† - Geneva, Switzerland
Centro Brasileiro de Pesquisas Fisicas (CBPF)† - Rio de Janeiro, Brazil
Columbia University* - NY, USA
Fermi National Accelerator Laboratory† - Batavia, IL, USA
Illinois Institute of Technology* - IL, USA
Institute for Advanced Studies, Princeton† - NJ, USA
Institute of Mathematics and Science† - Chennai, India
Instituto de Fisica Teorica (IFT-UNESP)* - Sao Paulo, Brazil
Instituto Superior Tecnico de Lisboa (IST-Lisbon)† - Lisbon, Portugal
International Center for Theoretical Physics (ICTP)† - Trieste, Italy
Kavli Institute for Theoretical Physics, Santa Barbara† - CA, USA
Lawrence Berkeley National Laboratory† - CA, USA
Los Alamos National Laboratory† - NM, USA
MIT* - USA
Michigan State University† - USA
Northwestern University†* - IL, USA
Ohio State University† - USA
Oklahoma State University†* - USA
Perimeter Institute for Theoretical Physics† - Canada
Pontificia Universidade Catolica do Rio de Janeiro (PUC-Rio)†* - Brazil
Purdue University - West Lafayette - Indiana† - USA
Scuola Normale Superiore† - Pisa, Italy
SLAC† - Palo Alto, CA, USA
Universidade Estadual de Campinas (UNICAMP)† - Campinas, Brazil
Universidade Estadual de Sao Carlos (USP-Sao Carlos)* - Sao Carlos, Brazil
Universita di Padova† - Italy
Universitat de Valencia† - Spain
University of Arizona†* - Tucson, USA
University of Bern† - Bern, Switzerland
University of California, Berkeley† - USA
University of Chicago†* - IL, USA
University of Florida† - Gainesville - USA
University of Guelph* - Canada
University of Illinois, Chicago† - USA
University of Illinois, Urbana-Champaign†* - USA
University of Maryland† - USA
University of Michigan† - USA

University of Minnesota, Minneapolis† - USA
University of Notre Dame†⋆ - USA
University of Pennsylvania - Philadelphia† - USA
University of Pittsburgh† - PA, USA
University of Washington, Seattle† - USA
University of Wisconsin, Madison†⋆ - USA
Wayne State University† - MI, USA
Yale University†⋆ - CN, USA

Community Service, Peer Review and Related Activities

Member of the Particle Data Group.
Member of the ICFA (International Committee on Future Accelerators) Neutrino Panel,
one of five representatives of the Americas.
Fellow of the American Physical Society.
Referee for European Physical Journal C, International Journal of Modern Physics A,
Journal of High Energy Physics (JHEP), Journal of Physics G, New Journal of Physics,
Nuclear Physics B, Physical Review D, Physical Review Letters, Physics Letters B, Physics Reports.
Referee for the United States Department of Energy (DOE), the National Science Foundation (NSF),
the Natural Sciences and Engineering Research Council (NSERC - Canada),
Research Corporation for Science Advancement.
Reviewer for the Princeton University Press.

2003-2008	Organizer of the HEP Seminar at Northewestern University.
2012-2013	Convener of the Neutrino Physics Working Group at the DPF Community Summer Study "Snowmass on the Mississippi" (with K. Pitts, K. Scholberg, G. Zeller).
2013	Organizer of the Neutrino Parallel Sessions of the 'Intensity Frontier Workshop at ANL' (with K. Scholberg, G. Zeller)
2013	Organizer of the 'Intensity Frontier Neutrino Subgroup Workshop at SLAC' (with K. Scholberg, G. Zeller)
2013	Organizer of the 'New Directions in Neutrino Physics' Aspen Winter Workshop (with C. Hall, G. McLaughlin, R. Patterson, D. Saltzberg, K. Schlberg, K. Volpe)
2012	Member of the Local Organizing Committee for the DPF Community Planning Meeting, Fermilab
2012	Convener of the Neutrino Physics Working Group at the Project X Physics Study Meeting (with G. Mills, P. Huber, K. Nishikawa)
2012	Organizer of the '4th Neutrino?' Workshop at the KICP, University of Chicago (with K. Abazajian)
2012	Member of the Fermilab Short Baseline Neutrino Focus Group (Chaired by Steve Geer).
2011	Convener of the Neutrino Physics Working Group at the DOE Workshop on the "Fundamental Physics at the Intensity Frontier," in Rockville, MD (with K. Pitts, K. Scholberg, G. Zeller).
2010	Organizer of "νTheme: Neutrino Theory, Models and Experimental Perspectives," Summer Workshop at CERN (with S. Pascoli *et al.*).
2010	ICHEP 2010 Convener for the "Neutrino Physics" Parallel Sesssion (with A. Abada, F. Suekane, F. Terranova, M. Zito).
2009	Organizer of the Extreme Beam Lecture Series at Fermilab (with H. White)
2009	DPF 2009 Convener for the "Neutrino Physics" Parallel Sesssion (with K. Scholberg).
2009	Member of the Local Organizing Committee for the Neutrino Factory Conference, at the IIT.
2009	Organizer of Summer Workshop at the Aspen Center for Physics, "Neutrino Physics on Earth, in the Stars, and in the Cosmos" (with A. Friedland and I. Mocioiu).
2008	Convener for the Muon Working Group at the Second Workshop on Physics with a High Intensity Proton Source, Fermilab (with W. Molzon).
2007	Convener for the Muon Working Group at the First Workshop on Physics with a High Intensity Proton Source, Fermilab (with W. Molzon).
2006	CIPANP 2006 Convener for the "Neutrino Masses and Mixing" Session (with S. Elliott and R. Rameika).
2006	Member of the International Advisory Committee of the 2006 Aspen Winter Conference on High Energy Physics.

2005	Member of the Local Organizing Committee for the Kaon 2005 Conference.
2005	WIN 2005 Convener for the "Neutrino Physics" Working Group (with J. Klein).
2004	Member of the Writing Committee for the DNP/DPF/DAP/DPB Joint Study on the Future of Neutrino Physics (chairs S. Freedman and B. Kayser).
2004	Organizer of the 2004 version of the "Greater Chicagoland Seminar" at Northwestern University, November 1.
2003	Scientific Secretary for the 2003 Lepton-Photon Conference at Fermilab.
2003	SUSY 2003 Convener for the "Neutrinos and Charged Leptons" Session (with K. Babu).
2001-2003	Organizer of the Theory Group Seminar at Fermilab.
1995	Scientific Secretary for LISHEP 1995.
1993	Scientific Secretary for LISHEP 1993.

Personal Information

Date of Birth: 14 May 1972
Place of Birth: Oakland, CA - USA
Marital Status: married (Marcia, brazilian/american), daughter (Andrea, brazilian/american), son (Rafael, brazilian/american)
Citizenship: Brazil, USA
Language skills: Portuguese (native), English (quasi-native), French, Spanish, and Italian, rudimentary knowledge of German and Russian.

Departmental Committee Work (at Northwestern University)

2012-present	Director of Undergraduate Studies
2012-present	Undergraduate Curriculum Committee (Chair)
2010-2012	Space Committee
2011-2012	Search Committee for Astroparticle Physics Experimental Junior Faculty Member
2010-2011	Search Committee for High Energy Experimental Junior Faculty Member (Chair)
2009	Search Committee for High Energy Theory Junior Faculty Member
2009-2012	Qualifying Exam Committee
2009-2010	Colloquium Committee (Chair)
2007	Search Committee for High Energy Theory Junior Faculty Member
2005-2006	Qualifying Exam Committee
2004-2005	Colloquium Committee
2004-2008	Graduate Admissions Committee (Chair of Committee in 2007 and 2008)

Exam Committees, including Theses Defenses (at Northwestern University)

2013	Thesis Defense Committee for Roberto Vega-Morales Thesis Title: " Dark Matter and Vector-like Leptons From Gauged Lepton Number" Chair: Ian Low
2013	Thesis Defense Committee for Shashank Shalgar Thesis Title: "Transition Magnetic Moment and Collective Neutrino Oscillations" Chair: Andre de Gouvea
2012	Candidacy Exam Committee for T.C. Huang Chair: Frank Petriello
2012	Candidacy Exam Committee for Andrew Kobach Chair: Andre de Gouvea
2012	Thesis Defense Committee for Kunal Kumar Thesis Title: "Considerations in Discovering the Higgs at the Energy Frontier" Chair: Ian Low
2012	Thesis Defense Committee for Steve Won Thesis Title: "A Search for the Flavor-Changing Neutral Current Top Quark Decay in 5.0 fb^{-1} of pp at $\sqrt{s} = 7$ TeV with the CMS Experiment at the LHC"

Chair: Mayda Velasco

2011 Thesis Defense Committee for Dale Stentz
Thesis Title: "Measurement of the $W + n$ inclusive jets cross-section at CDF Run II"
Chair: Michael Schmitt

2011 Thesis Defense Committee for Sean Dobbs
Thesis Title: "Observation of $\eta_b(1S)$ and $\eta_b(2S)$ in Exclusive Radiative Decays of $\Upsilon(1S)$ and $\Upsilon(2S)$"
Chair: Kamal Seth

2011 Thesis Defense Committee for Carol Brown
Thesis Title: "Tools for a Semiclassical Theory of Multispin Systems"
Chair: Anupam Garg

2011 Thesis Defense Committee for Wei-Chih Huang
Thesis Title: "Right-handed Neutrinos"
Chair: Andre de Gouvea

2010 Candidacy Exam Committee for Shashank Shalgar
Chair: Andre de Gouvea

2010 Thesis Defense Committee for Sahal Yacoob
Thesis Title: "Measurement of the W Boson Mass in Proton-Antiproton Collisions at a Center of Mass Energy of 1.96 TeV"
Chair: Heidi Schellman

2009 Candidacy Exam Committee for Kunal Kumar
Chair: Ian Low

2009 Candidacy Exam Committee for Roberto Vega-Morales
Chair: Ian Low

2009 Candidacy Exam Committee for Steve Won
Chair: Mayda Velasco

2009 Candidacy Exam Committee for Wei-Chih Huang
Chair: Andre de Gouvea

2009 Thesis Defense Committee for SungWoo Youn
Thesis Title: "Evidence for $B_s \to D_s^{(*)} D_s^{(*)}$ and a Measurement of $\Delta\Gamma_s^{CP}$"
Chair: David Buchholtz

2008 Thesis Defense Committee for Derek Strom
Thesis Title: "Study of CP Violation in $B_s \to J/\psi\phi$ Decays at D0"
Chair: David Buchholtz

2008 Thesis Defense Committee for Genya Takeda
Thesis Title: "The Origin of High Eccentricities in Extrasolar Planets"
Chair: Fred Rasio

2008 Thesis Defense Committee for Tim Andeen
Thesis Title: "Measurement of the W-Boson Mass with the D0 Run II Detector Using the Electron p_T Spectrum"
Chair: Heidi Schellman

2008 Thesis Defense Committee for Meghan Anzelc
Thesis Title: "Study of B_s Mixing at the D-Zero Detector at Fermilab Using the Decay $B_s \to D_s \mu\nu X$"
Chair: David Buchholtz

2008 Thesis Defense Committee for James Jenkins
Thesis Title: "Model Independent Explorations of Majorana Neutrino Mass Origins"
Chair: Andre de Gouvea

2006 Candidacy Exam Committee for Carol Braun
Chair: Anupam Garg

2006 Candidacy Exam Committee for James Jenkins
Chair: Andre de Gouvea

2006 Candidacy Exam Committee for Sean Dobbs
Chair: Kamal K. Seth

2006 Thesis Defense Committee for Chunglee Kim
Thesis Title: "Galactic Merger Rates of Pulsar Binaries"
Chair: Vassiliki Kalogera

2006 Thesis Defense Committee for Peter Zweber

Thesis Title: "Precision Measurements of Timelike Electromagnetic Form Factors of the Pion, Kaon, and Proton"
Chair: Kamal K. Seth

2006 Candidacy Exam Committee for SungWoo Youn
Chair: David Buchholtz

2006 Candidacy Exam Committee for Meghan Alzelc
Chair: David Buchholtz

2005 Candidacy Exam Committee for Derek Strom
Chair: David Buchholtz

2005 Candidacy Exam Committee for Sahal Yacoob
Chair: Heidi Schellman

2005 Candidacy Exam Committee for Genya Takeda
Chair: Fred Rasio

2004 Candidacy Exam Committee for Dale Stentz
Chair: Michael Schmitt

2004 Thesis Defense Committee for Muge Unel
Thesis Title: "High Mass Di-Lepton Pairs at CDF Run 2"
Chair: Michael Schmitt

2004 Candidacy Exam Committee for Anne Dabrowisky
Chair: Mayda Velasco

2004 Candidacy Exam Committee for Timothy Andeen
Chair: Heidi Schellman

2004 Thesis Defense Committee for David Joffe
Thesis Title: "A Search for the Single-P State $h_c(1^1P_1)$ of Charmonium in Proton-Antiproton Annihilations at Fermilab Experiment E835p"
Chair: Kamal K. Seth

2004 Candidacy Exam Committee for Chunglee Kim
Chair: Vassiliki Kalogera

Advising

Postdoctoral Fellows

2010-2013 Dr. Jennifer Erin Kile (funded by DOE) → Postdoctoral Fellow at U Florida
2011 Dr. Gabriel Shaughnessy (funded by DOE and ANL) → Postdoctoral Fellow at UW Madison
2004-2006 Dr. Shrihari Gopalakrishna (funded by Northwestern University) → Postdoctoral Fellow At Brookhaven National Laboratory

Graduate Students

2004-2008 James Jenkins (Northwestern University) → Postdoctoral Fellow At Los Alamos National Laboratory
2006-2011 Wei-Chi Huang (Northwestern University) → Postdoctoral Fellow at SISSA (Trieste, Italy)
2009-2013 Shashank Shalgar (Northwestern University) → Postdoctoral Fellow At U New Mexico
2011-present Andrew Kobach (Northwestern University)

Graduate Students, Independent Study

2004-2008 James Jenkins (Northwestern University)
2005-2008 Wei-Chih Huang (Northwestern University)
2007 William Shepherd (Northwestern University)
2008-2013 Shashank Shalgar (Northwestern University)
2009-2013 Andrew Kobach (Northwestern University)

Undergraduate Students, Summer Research Project

2005 Tim Linden (Sophomore, ISP Program, Northwestern University)
2005 Gabriel Weil (Sophomore, ISP Program, Northwestern University)
2008 Thomas Wytock (Graduated June 2008, ISP/Physics & Astronomy, Northwestern University)
2008 Yonatan Kahn (Senior, Physics/Mathematics, Northwestern University)
2011 David Caratelli (Junior, ISP/Physics & Astronomy, Northwestern University)

Undergraduate Students, Independent Study

2006-2008 Thomas Wytock (Junior/Senior, ISP Program, Northwestern University)
2009-2010 Alex Jeffers (Junior/Senior, ISP/Physics & Astronomy, Northwestern University)
2010-2012 David Caratelli (Senior, ISP/Physics & Astronomy, Northwestern University)

Publications in Peer Reviewed Journals

1. "Lepton Flavor and Number Conservation, and Physics Beyond the Standard Model," (with P. Vogel) Prog. Part. Nucl. Phys. **71**, 75 (2013).
2. "The Lightest Massive Invisible Particles at the LHC," (with A.C. Kobach), Nuclear Physics B **874**, 399 (2013).
3. "Transition Magnetic Moments and Collective Neutrino Oscillations:Three-Flavor Effects and Detectability," (with S. Shalgar), JCAP **1304**, 018 (2013).
4. "Effect of Transition Magnetic Moments on Collective Supernova Neutrino Oscillations," (with S. Shalgar), JCAP **1210**, 027 (2012).
5. "Review of Particle Physics (RPP)," (with J. Beringer *et al.* [Particle Data Group Collaboration]), Phys. Rev. D **86**, 010001 (2012).
6. "Constraining the (Low-Energy) Type-I Seesaw," (with W.-C. Huang), Phys. Rev. D **85**, 053006 (2012).
7. "Parameterizing Majorana Neutrino Couplings in the Higgs Sector," (with W.-C. Huang and S. Shalgar), Phys. Rev. D **84**, 035011 (2011).
8. "Atmospheric Tau Neutrinos in a Multi-kiloton Liquid Argon Detector," (with J. Conrad, S. Shalgar and J. Spitz), Phys. Rev. D **82**, 093012 (2010).
9. "QCD Precision Measurements and Structure Function Extraction at a High Statistics, High Energy Neutrino Scattering Experiment: NuSOnG," (with T. Adams *et al.*), Int. J. Mod. Phys. A **25**, 909 (2010).
10. "Fermilab's Intensity Frontier," (with N. Saoulidou), Annu. Rev. Nucl. Part. Sci. **60**, 513 (2010).
11. "Pseudo-Dirac Neutrinos in the New Standard Model," (with W.-C. Huang and J. Jenkins), Phys. Rev. D **80**, 073007 (2009).
12. "Renaissance of the $\sim$1 TeV Fixed-Target Program," (with T. Adams *et al.*), Int. J. Mod. Phys. A **25**, 777 (2010).
13. "Neutrino Alternatives For Missing Energy Events At Colliders," (with Spencer Chang), Phys. Rev. D **80**, 015008 (2009).
14. "Light Sterile Neutrino Effects at θ_{13}-Sensitive Reactor Neutrino Experiments," (with T. Wytock), Phys. Rev. D **79**, 073005 (2009).
15. "Physics at a future Neutrino Factory and super-beam facility," (with A. Bandyopadhyay *et al.*), Rept. Prog. Phys. **72**, 106201 (2009).
16. "Review of particle physics," (with C. Amslar *et al.* [Particle Data Group]), Phys. Lett. B **667**, 1 (2008).
17. "The Physical Range of Majorana Neutrino Mixing Parameters," (with James Jenkins), Phys. Rev. D **78**, 053003 (2008).
18. "Terascale Physics Opportunities at a High Statistics, High Energy Neutrino Scattering Experiment: NuSOnG," (with T. Adams *et al.*), Int. J. Mod. Phys. A **24**, 671 (2009).
19. "Collider aspects of flavour physics at high Q," (with F. del Aguila *et al.*), Eur. Phys. J. C **57**, 183 (2008).

20. "A Survey of Lepton Number Violation Via Effective Operators," (with J. Jenkins), Phys. Rev. D **77**, 013008 (2008).

21. "Gauge trimming of neutrino masses," (with M.-C. Chen and B. Dobrescu), Phys. Rev. D **75**, 055009 (2007).

22. "Neutrino phenomenology of very low-energy seesaws" (with J. Jenkins and N. Vasudevan), Phys. Rev. D **75**, 013003 (2007).

23. "Theory of Neutrinos: A White Paper" (with R. Mohapatra *et al.*), Rept. Prog. Phys. **70**, 1757 (2007).

24. "Review of particle physics," (with W. M. Yao *et al.* [Particle Data Group]), J. Phys. G **33**, 1 (2006).

25. "Stop decay into right-handed sneutrino LSP at hadron colliders" (with S. Gopalakrishna and W. Porod), JHEP **0611**, 050 (2006).

26. "A three-flavor, Lorentz-violating solution to the LSND anomaly" (with Y. Grossman), Phys. Rev. D **74**, 093008 (2006).

27. "What can we learn from neutrino electron scattering?" (with J. Jenkins), Phys. Rev. D **74**, 033004 (2006).

28. "Right-handed sneutrinos as nonthermal dark matter" (with S. Gopalakrishna and W. Porod), JCAP **0605**, 005 (2006).

29. "What would it take to determine the neutrino mass hierarchy if θ_{13} were too small?" (with W. Winter), Phys. Rev. D **73**, 033003 (2006).

30. "Low-energy neutrino Majorana phases and charged-lepton electric dipole moments" (with S. Gopalakrishna), Phys. Rev. D **D72**, 093008 (2005).

31. "See-Saw Energy Scale and the LSND Anomaly," Phys. Rev. D **72**, 033005 (2005).

32. "Neutrino mass hierarchy, vacuum oscillations, and vanishing $|U_{e3}|$" (with J. Jenkins and B. Kayser), Phys. Rev. D **71**, 113009 (2005).

33. "Probing new physics by comparing solar and KamLAND data" (with C. Peña-Garay), Phys. Rev. D **71**, 093002 (2005).

34. "Neutrinos Have Mass – So What?," Mod. Phys. Lett. A **19**, 2799 (2004) [invited brief review].

35. "Deviation of Atmospheric Mixing from Maximal and Structure in the Leptonic Flavor Sector," Phys. Rev. D **69**, 093007 (2004).

36. "Invisible Z-Boson Decays at e^+e^- Colliders" (with M. Carena, A. Freitas, and M. Schmitt), hep-ph/0308053, Phys. Rev. D **68**, 113007 (2003).

37. "Statistical Test of Anarchy" (with H. Murayama), hep-ph/0301050, Phys. Lett. B **573**, 94 (2003).

38. "Manifest CP Violation from Majorana Neutrino Phases" (with B. Kayser and R.N. Mohapatra), hep-ph/0211394, Phys. Rev. D **67**, 053004 (2003).

39. "Can a CPT Violating Ether Solve All Neutrino Puzzles?," hep-ph/0204077, Phys. Rev. D **66**, 076005 (2002).

40. "Solving the Solar Neutrino Puzzle with KamLAND and Solar Data," (with C. Peña-Garay), hep-ph/0107186, Phys. Rev. D **64**, 113011 (2001).

41. "Phenomenological Implications of Neutrinos in Extra Dimensions," (with G.F. Giudice, A. Strumia and K. Tobe), hep-ph/0107156, Nucl. Phys. B **623**, 395 (2002).

42. "Neutrino Masses and Lepton Flavor Violation in Thick Brane Scenarios," (with G. Barenboim, G.C. Branco and M.N. Rebelo), hep-ph/0104312, Phys. Rev. D **64**, 073005 (2001).

43. "Split Fermions in Extra Dimensions and CP Violation," (with G.C. Branco and M.N. Rebelo), hep-ph/0012289, *Phys. Lett. B* **506**, 115 (2001).

44. "Minimalistic Neutrino Mass Model" (with J.W.F. Valle), hep-ph/0010299, Phys. Lett. B **501**, 115 (2001).

45. "Lepton Flavor Violation in Supersymmetric Models with Trilinear R-Parity Violation" (with S. Lola and K. Tobe), hep-ph/0008085, Phys. Rev. D **63**, 035004 (2001).

46. "The Oscillation Probability of GeV Solar Neutrinos of All Active Species," hep-ph/0006157, Phys. Rev. D **63**, 093003 (2001).

47. "Determining the Flavour Content of the Low Energy Solar Neutrino Flux," (with H. Murayama), hep-ph/0003210, JHEP **0008**,025 (2000).

48. "The Dark Side of the Solar Neutrino Parameter Space," (with A. Friedland and H. Murayama), hep-ph/0002064, Phys. Lett. B **490**, 125 (2000).

49. "Earth Matter Effects in ^{7}Be Solar Neutrino Experiments," (with A. Friedland and H. Murayama), hep-ph/9910286, JHEP **0103**, 009 (2001).

50. "Seasonal Variation of the ^{7}Be Solar Neutrino Flux," (with A. Friedland and H. Murayama), hep-ph/9904399, Phys. Rev. D **60**, 093011 (1999).

51. "Establishing a $\nu_{\mu,\tau}$ Component in the Solar Neutrino Flux," (with H. Murayama), hep-ph/9812307, Phys. Rev. Lett. **82**, 3392 (1999).

52. "Seiberg Duality and e^+e^- Experiments," (with A. Friedland and H. Murayama), hep-th/9810020, Phys. Rev. D **59**, 105008 (1999).

53. "Less Minimal Supersymmetric Standard Model" (with A. Friedland and H. Murayama), hep-ph/9803481, Phys. Rev. D **59**, 095008 (1999).

54. "Next-to-Minimal Supersymmetric Standard Model with the Gauge Mediation of Supersymmetry Breaking" (with A. Friedland and H. Murayama), hep-ph/9711264, Phys. Rev. D **57**, 5676 (1998).

55. Cosmology of Supersymmetric Models with Low-Energy Gauge Mediation" (with T. Moroi and H. Murayama), hep-ph/9701244, Phys. Rev. D **56**, 1281 (1997).

56. "Excluding Light Gluinos from Z decays" (with H. Murayama), hep-ph/9606449, Phys. Lett. B **400**, 117 (1997).

Contributions to Conference Proceedings

57. "What Is The Energy Scale Of The Physics Responsible For Neutrino Masses?," (with J. Jenkins), J. Phys. Conf. Ser. **136**, 042022 (2008).

58. "Beyond 3 Neutrino Oscillations," PoS **NUFACT08**, 021 (2008).

59. "Neutrino Masses and Mixing - Theory," arXiv:0902.4656 [hep-ph]. In Proceedings of Heavy Quarks and Leptons 2008 (HQ&L08), Melbourne, Australia, 5-9 Jun 2008.

60. "Theoretical motivation for electroweak physics with neutrinos," PoS **NUFACT08**, 067 (2008).

61. "Right-handed sneutrino cosmology and hadron collider signatures," (with S. Gopalakrishna and W. Porod), AIP Conf. Proc. **903**, 221 (2007).

62. "The brave ν world," AIP Conf. Proc. **857**, 3 (2006).

63. "Neutrino physics: Theory," Int. J. Mod. Phys. A **20**, 2907 (2005).

64. "Neutrino Properties and Tests of Symmetries," Nucl. Phys. Proc. Suppl. **143**, 167 (2005).

65. "Theoretical Aspects of Charged-Lepton Flavor Violation," AIP Conf. Proc. **721**, 275 (2004).

66. "Natural Expectations for the Value for $|U_{e3}|$?," AIP Conf. Proc. **721**, 175 (2004).

67. "Theoretical Aspects of Neutrino Oscillations," hep-ph/0109150, Nucl. Instrum. Meth. A **503**, 4 (2001).

68. "The Oscillation Probability of Solar Neutrinos of All Active Species," Nucl. Phys. Proc. Suppl. **95**, 141 (2001).

Preprints, Reports, and Experimental Proposals

69. 'Whitepaper on the DAEdALUS Program," (with C. Aberle *et al.*), arXiv:1307.2949 [physics.acc-ph].

70. "$H \to \gamma\gamma$ as a Triangle Anomaly: Possible Implications for the Hierarchy Problem," (with J. Kile and R. Vega-Morales), arXiv:1306.5767 [hep-ph].

71. "Project X: Physics Opportunities," (with A.S. Kronfeld, R. S. Tschirhart, U. Al-Binni *et al.*), arXiv:1306.5009 [hep-ex].

72. "Neutrinos from Stored Muons nuSTORM: Expression of Interest," (with D. Adey *et al.*), arXiv:1305.1419 [physics.acc-ph].

73. "Mu2e Conceptual Design Report," (with R. J. Abrams *et al.* [Mu2e Collaboration]), arXiv:1211.7019 [physics.ins-det].

74. "Dark Matter From Weak Polyplets," (with W.-C. Huang and J. Kile), arXiv:1207.0510 [hep-ph].

75. "Short-Baseline Neutrino Focus Group Report," (with S.J. Brice, *et al.*), FERMILAB-FN-0947.

76. "nuSTORM - Neutrinos from STORed Muons: Letter of Intent to the Fermilab Physics Advisory Committee," (with P. Kyberd *et al.* [nuSTORM Collaboration]), arXiv:1206.0294 [hep-ex].

77. "Fundamental Physics at the Intensity Frontier,"(with J. L. Hewett *et al.*), arXiv:1205.2671 [hep-ex].

78. "Light Sterile Neutrinos: A White Paper," (with K.N. Abazajian *et al.*), arXiv:1204.5379 [hep-ph].

79. "Neutrino Mixing Anarchy: Alive and Kicking," (with H. Murayama), arXiv:1204.1249 [hep-ph].

80. "Interim Design Report for the International Design Study for a Neutrino Factory," (with S. Choubey *et al.*), FERMILAB-DESIGN-2011-01.

81. "International Design Study for the Neutrino Factory: First Progress Report," (with S. Choubey *et al.*), IDS-NF-017.

82. "International Design Study for the Neutrino Factory, Interim Design Report," (with S. Choubey *et al.*), IDS-NF-20.

83. "A Study of Detector Configurations for the DUSEL CP Violation Searches Combining LBNE and DAEdALUS," (with J. Alonso *et al.*), arXiv:1008.4967 [hep-ex].

84. "Physics with a High Intensity Proton Source at Fermilab: Project X Golden Book," (with J. Appel *et al.*),

85. "Summary report of MINSIS workshop in Madrid," (with R. Alonso *et al.*), arXiv:1009.0476 [hep-ph].

86. "Expression of Interest for a Novel Search for CP Violation in the Neutrino Sector: DAEdALUS," (with J. Alonso *et al.*), arXiv:1006.0260 [physics.ins-det].

87. "Expression of Interest for Neutrinos Scattering on Glass: NuSOnG," (with T. Adams *et al.*), arXiv:0907.4864 [hep-ex].

88. "The New (g-2) Experiment: A proposal to measure the muon anomalous magnetic moment to +-0.14 ppm precision," (with R.M. Carey *et al.*), FERMILAB-PROPOSAL-0989.

89. "Proposal to search for $\mu^- N \to e^- N$ with a single event sensitivity below 10^{-16}," (with R.M. Carey *et al.*), FERMILAB-PROPOSAL-0973.

90. "DUSEL Theory White Paper," (with S. Raby *et al.*), arXiv:0810.4551 [hep-ph].

91. "GeV Seesaw, Accidentally Small Neutrino Masses, and Higgs Decays to Neutrinos," arXiv:0706.1732 [hep-ph].

92. "Physics at a Fermilab proton driver" (with M. G. Albrow *et al.*), hep-ex/0509019.

93. "Non-oscillation probes of the neutrino mass hierarchy and vanishing $|U_{e3}|$" (with J. Jenkins), hep-ph/0507021.

94. "Theory of Neutrinos" (with R. Mohapatra *et al.*), hep-ph/0412099.

95. "Neutrino Physics," hep-ph/0411274, NUHEP-TH/04-17, Contributed to Theoretical Advance Study Institute in Elementary Particle Physics (TASI 2004): Physics in D $\geq$ 4, Boulder, Colorado, 6 Jun – 2 Jul 2004.

96. "The Neutrino Matrix" – DNP/DPF/DAP/DPB Joint Study on the Future of Neutrino Physics, November 2004 (member of the writing committee, H. Robertson *et al.*).

97. "Report of the APS Neutrino Study Reactor Working Group" (with E. Abouzaid *et al.*), LBNL-56599.

98. 'White paper report on using nuclear reactors to search for a value of θ_{13}" (with K. Anderson *et al.*), hep-ex/0402041.

99. "Detector R&D for Future Neutrino Experiments with the NuMI Beamline" (with G. Barenboim *et al.*), hep-ex/0304017. "Report to Fermilab Directorate from the Study Group on Future Neutrino Experiments at Fermilab."

100. "Long Baseline Neutrino Experiments and the LOW Solution: What Is Left To Do And How Well Can It Be Done" (with G. Barenboim), hep-ph/0209117.

101. "Oscillation Physics with a Neutrino Factory" (with M. Apollonio *et al.*), hep-ph/0210192. "Report of the Neutrino Oscillation Working Group for the ECFA – CERN study on Neutrino Factory and Muon Storage Ring at CERN, in "CERN Yellow Report on the Neutrino Factory."

102. "Physics Potential at FNAL with Stronger Proton Sources" (with G. Barenboim *et al.*), hep-ex/0206025, FERMILAB-FN-720, nuhep-exp/2002-03.

103. "Neutrino Oscillations with a Proton Driver Upgrade and an Off-Axis Detector – A Case Study" (with G. Barenboim, M. Szleper and M. Velasco), hep-ph/0204208, FERMILAB-PUB-02-066-T, nuhep-exp/2002-01.

104. "Physics with Low-Energy Muons at a Neutrino Factory Complex" (with J. Aysto *et al.*), hep-ph/0109217, "Report of the Stopped Muons Working Group for the ECFA – CERN study on Neutrino Factory and Muon Storage Rings at CERN," in "CERN Yellow Report on the Neutrino Factory."